

REMARKS

The Specification is amended to correct errors of a typographical nature and to provide descriptions for features shown in the drawings, as discussed below.

Claims 1 and 2 are amended to more clearly define the claimed invention and to present Claim 2 in independent form.

Declaration:

The Declaration is defective because the mailing address and citizenship of one of the inventors is not provided in the Declaration.

A Declaration will be forthcoming having the post office address of Takeo Nanba shown as being 252-66 Takadacho, Kounan-ku, Yokohama, Japan; and the citizenship of Takeo Nanba shown as being Japanese.

Drawings:

The drawings are objected to under 37 CFR §1.83(a) because they fail to show reference character “17e” as described in the specification at page 19, line 25.

In the specification at page 19, line 25, “17 e” should read “15 e”. The specification is amended to correct the typographical error. Crank pin 15e is shown in Figs. 1, 3, 4, and 5.

The drawings are objected to because the reference character “16 b” on Fig. 1 and reference character “25” on Fig. 4 are not described in the specification.

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The specification is amended to describe elements of the drawings referred to by reference characters "16b" and "25".

It is believed that no changes are necessary to the drawings and that the amendments to the specification, to refer to "16 b" and "25", should overcome the present objection. No new matter is added to the disclosure. Removal of the rejection is respectfully requested.

Claims 1 and 2 are rejected under 35 USC §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Reconsideration and removal of this rejection is respectfully requested.

Claim 1 is amended to provide proper antecedent basis for "the conveyance direction."

In view of the amendment to Claim 1, removal of this rejection is respectfully requested.

The present invention is a chopper folder for a rotary press for folding signatures which are periodically conveyed, one signature at a time, from a folding machine. The chopper folder has a pair of folding rollers for folding a signature parallel to a conveyance direction of the signatures, a prime mover, a crank arm fixed to an output shaft of the prime mover to be rotated together with the output shaft, a blade holder connected to the crank arm via a link, a chopper blade held in the blade holder and adapted to push the signature from an upper surface thereof in order to insert the signature into a space between the pair of folding rollers, and at least one guide unit for restricting motion of the blade holder such that the blade holder reciprocates only in a direction perpendicular to a conveyance plane along which the signature is conveyed.

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Claim 1 is rejected under 35 USC §102(b) as being anticipated by Dufour. Reconsideration and removal of this rejection is respectfully requested.

The Office Action alleges that Dufour discloses a pair of folding rollers “22” and “24”, a prime mover (not numerically identified) attached to crank “38”, a blade holder (not numerically identified – in vicinity of blade “34”), a chopper blade “34”, and a guide unit “82”.

It is respectfully submitted that in Dufour, the alleged corresponding components are not found in the same situation and united in the same way so as to function in the same manner as defined in present Claim 1. In Dufour, the chopper blade moves in an arcuate path about the axis of support shaft (84), as best viewed in Fig. 2. In the present claimed invention, the guide unit restricts the motion of the blade roller, and thus the blade, to reciprocate only in a direction which is perpendicular to the conveyance plane along which the signature is conveyed.

It is respectfully submitted that Dufour does not describe or suggest a reciprocating movement perpendicular to the conveyance plane. In view of the above remarks, removal of this rejection is respectfully requested.

Allowable Subject Matter:

It is indicated in the Office Action that Claim 2 would be allowable if rewritten to overcome the rejection under 35 USC §112, second paragraph, set forth in the Office Action and to include all of the limitations of the base claim and any intervening claims. With the amendment of Claim 2, it is believed that Claim 2 is now in condition for allowance. Additionally, it is believed that Claim 1 is in condition for allowance. Allowance of Claims 1 and 2 is respectfully requested.

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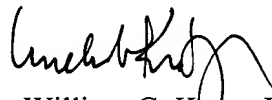
Attached hereto is a marked-up version of the changes made to the specification and claims by the present amendments. The attached pages are captioned "**A Version with Markings to Show Changes Made**".

If there are any issues of a minor nature remaining, the Examiner is urged to contact Applicants' attorney, the undersigned, at Area Code (202) 659-2930.

In the event that any fees are due in connection with this paper, please charge our Deposit Account No. 01-2340.

Respectfully submitted,

ARMSTRONG, WESTERMAN & HATTORI, LLP



William G. Kratz, Jr.
Attorney for Applicants
Reg. No. 22,631

WGH/nrp

Enclosure: Version with Markings to Show Changes Made

Atty. Docket No. 010797
Suite 1000, 1725 K Street, N.W.
Washington, D.C. 20006
(202) 659-2930



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PATENT TRADEMARK OFFICE

Version with Markings to Show Changes Made

IN THE SPECIFICATION:

The paragraph beginning at page 19, line 7, is amended as follows:

The amount of eccentricity e of the crank pin 15e with respect to the rotary center line 24 of the motor 7 and the rotary center line 25 of crank arm 15 is half a properly determined stroke within which the chopper blade 3 reciprocates vertically between top dead and bottom dead points.

The paragraph beginning at page 19, line 23, is amended as follows:

The crank arm 15 is connected to the blade holder 16 via a link 17. Specifically, one end of the link 17 is rotatably attached to the tip end of the crank pin [17e] 15e via a bearing 17a. The other end of the link 17 is rotatably attached via a bearing 17b to the tip end of a shaft member 16a, which is fixed to the upper end of a longitudinal-center portion of the blade holder 16 via [a bearing 17b] bolts 16b.

IN THE CLAIMS:

Please amend Claims 1 and 2 to read as follows:

1. (Amended) A chopper folder for a rotary press for folding signatures which are periodically conveyed, one signature at a time, from a folding machine, comprising:

a pair of folding rollers for folding a signature parallel to [the] a conveyance direction of said signatures;

a prime mover;

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a crank arm fixed to an output shaft of the prime mover to be rotated together with the output shaft;

a blade holder connected to the crank arm via a link;

a chopper blade held in the blade holder and adapted to push the signature from an upper surface thereof in order to insert the signature into a space between the pair of folding rollers; and

at least one guide unit for restricting motion of the blade holder such that the blade holder reciprocates only in a direction perpendicular to a conveyance plane along which the signature is conveyed.

2. (Amended) A chopper folder for a rotary press [according to claim 1] for folding signatures which are periodically conveyed, one signature at a time, from a folding machine, comprising:

a pair of folding rollers for folding a signature parallel to a conveyance direction of said signatures;

a prime mover;

a crank arm fixed to an output shaft of the prime mover to be rotated together with the output shaft;

a blade holder connected to the crank arm via a link;

a chopper blade held in the blade holder and adapted to push the signature from an upper surface thereof in order to insert the signature into a space between the pair of folding rollers; and

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at least one guide unit for restricting motion of the blade holder such that the blade holder reciprocates only in a direction perpendicular to a conveyance plane along which the signature is conveyed, wherein

the guide unit comprises sliders provided at opposite ends of the blade holder, and two guide rails arranged along the conveyance direction and adapted to guide the sliders;

the guide rails are supported such that a clearance greater than a thickness of the signature is provided between the guide rails and the conveyance plane, and each of the guide rails has a guide surface perpendicular to the conveyance plane; and

guided portions of the sliders are movable, while maintaining close contact with the guide surfaces of the guide rails at all times.